

# **EXHIBIT A**

SUPREME COURT OF THE STATE OF NEW YORK  
WESTCHESTER COUNTY

-----X  
KENDALL W. BROCK, JAMES GEORGE, GLYNN  
HAWLEY, MOSES LINEN, and KIMBERLY NEELY,

Index No. \_\_\_\_\_/2022

*Plaintiff,*

**SUMMONS**

*-against -*

Venue is designated pursuant to  
CPLR § 503(a) & (c) in that  
DYNAX CORPORATION'S  
PRINCIPAL PLACE OF  
BUSINESS in this county.

THE 3M COMPANY, f/k/a Minnesota Mining and  
Manufacturing Co., AGC CHEMICALS AMERICAS INC.,  
AMEREX CORPORATION, ARKEMA INC.,  
ARCHROMA U.S. INC., BASF CORPORATION,  
individually and as successor in interest to Ciba Inc.,  
BUCKEYE FIRE EQUIPMENT COMPANY, CARRIER  
GLOBAL CORPORATION, CHEMDESIGN PRODUCTS  
INC., CHEMGUARD INC. CHEMICALS, INC.,  
CLARIANT CORPORATION, individually and as  
successor in interest to Sandoz Chemical Corporation,  
CORTEVA, INC., individually and as successor in interest  
to DuPont Chemical Solutions Enterprise, DEEPWATER  
CHEMICALS, INC., DUPONT DE NEMOURS INC.,  
individually and as successor in interest to DuPont  
Chemical Solutions Enterprise, DYNAX CORPORATION,  
E. I. DUPONT DE NEMOURS AND COMPANY,  
individually and as successor in interest to DuPont  
Chemical Solutions Enterprise, KIDDE-FENWAL, INC.,  
individually and as successor in interest to Kidde Fire  
Fighting, Inc., NATION FORD CHEMICAL COMPANY,  
NATIONAL FOAM, INC., THE CHEMOURS  
COMPANY, individually and as successor in interest to  
DuPont Chemical Solutions Enterprise, THE CHEMOURS  
COMPANY FC, LLC, individually and as successor in  
interest to DuPont Chemical Solutions Enterprise, and  
TYCO FIRE PRODUCTS, LP, individually and as  
successor in interest to The Ansul Company, and DOE  
DEFENDANTS 1-20, fictitious names whose present  
identities are unknown,

*Defendants.*

-----X

SUPREME COURT OF THE STATE OF NEW YORK  
WESTCHESTER COUNTY

-----X  
KENDALL W. BROCK, JAMES GEORGE, GLYNN  
HAWLEY, MOSES LINEN, and KIMBERLY NEELY,

*Plaintiffs,*

*-against -*

THE 3M COMPANY, f/k/a Minnesota Mining and  
Manufacturing Co., AGC CHEMICALS AMERICAS INC.,  
AMEREX CORPORATION, ARKEMA INC.,  
ARCHROMA U.S. INC., BASF CORPORATION,  
individually and as successor in interest to Ciba Inc.,  
BUCKEYE FIRE EQUIPMENT COMPANY, CARRIER  
GLOBAL CORPORATION, CHEMDESIGN PRODUCTS  
INC., CHEMGUARD INC. CHEMICALS, INC.,  
CLARIANT CORPORATION, individually and as  
successor in interest to Sandoz Chemical Corporation,  
CORTEVA, INC., individually and as successor in interest  
to DuPont Chemical Solutions Enterprise, DEEPWATER  
CHEMICALS, INC., DUPONT DE NEMOURS INC.,  
individually and as successor in interest to DuPont  
Chemical Solutions Enterprise, DYNAX CORPORATION,  
E. I. DUPONT DE NEMOURS AND COMPANY,  
individually and as successor in interest to DuPont  
Chemical Solutions Enterprise, KIDDE-FENWAL, INC.,  
individually and as successor in interest to Kidde Fire  
Fighting, Inc., NATION FORD CHEMICAL COMPANY,  
NATIONAL FOAM, INC., THE CHEMOURS  
COMPANY, individually and as successor in interest to  
DuPont Chemical Solutions Enterprise, THE CHEMOURS  
COMPANY FC, LLC, individually and as successor in  
interest to DuPont Chemical Solutions Enterprise, and  
TYCO FIRE PRODUCTS, LP, individually and as  
successor in interest to The Ansul Company, and DOE  
DEFENDANTS 1-20, fictitious names whose present  
identities are unknown,

*Defendants.*

Index No. \_\_\_\_\_/2022

**COMPLAINT AND DEMAND  
FOR JURY TRIAL**

Trial by jury is desired in the  
County of WESTCHESTER

Venue is designated pursuant to  
CPLR § 503(a) & (c) in that  
DYNAX CORPORATION'S  
PRINCIPAL PLACE OF  
BUSINESS is in this county.

**COMPLAINT AND DEMAND FOR JURY TRIAL**

Plaintiffs KENDALL W. BROCK, JAMES GEORGE, GLYNN HAWLEY, MOSES LINEN, and KIMBERLY NEELY (“Plaintiffs”), by and through their undersigned counsel, hereby file this Complaint against Defendants, 3M COMPANY, f/k/a Minnesota Mining and Manufacturing Co., AGC CHEMICALS AMERICAS INC., AMEREX CORPORATION, ARKEMA INC., ARCHROMA U.S. INC., BASF CORPORATION, BUCKEYE FIRE EQUIPMENT COMPANY, CARRIER GLOBAL CORPORATION, CHEMDESIGN PRODUCTS INC., CHEMGUARD INC., CHEMICALS, INC., CLARIANT CORPORATION, CORTEVA, INC., DEEPWATER CHEMICALS, INC., DUPONT DE NEMOURS INC., DYNAX CORPORATION, E. I. DUPONT DE NEMOURS AND COMPANY, KIDDE-FENWAL, INC., NATION FORD CHEMICAL COMPANY, NATIONAL FOAM, INC., THE CHEMOURS COMPANY, THE CHEMOURS COMPANY FC, LLC, and TYCO FIRE PRODUCTS, LP, and DOE DEFENDANTS 1-20, fictitious names whose present identifies are unknown (collectively “Defendants”) and alleges, upon information and belief, as follows:

**INTRODUCTION**

1. This action arises from the foreseeable contamination of groundwater by the use of aqueous film-forming foam (“AFFF”) products that contained per- and poly-fluoroalkyl substances (“PFAS”), including perfluorooctane sulfonate (“PFOS”) and perfluorooctanoic acid (“PFOA”).

2. PFOS and PFOA are fluorosurfactants that repel oil, grease, and water. PFOS, PFOA, and/or their chemical precursors, are or were components of AFFF products, which are

firefighting suppressant agents used in training and firefighting activities for fighting Class B fires. Class B fires include fires involving hydrocarbon fuels such as petroleum or other flammable liquids.

3. PFOS and PFOA are mobile, persist indefinitely in the environment, bioaccumulate in individual organisms and humans, and biomagnify up the food chain. PFOS and PFOA are also associated with multiple and significant adverse health effects in humans, including but not limited to kidney cancer, testicular cancer, high cholesterol, thyroid disease, ulcerative colitis, and pregnancy-induced hypertension.

4. At various times from the 1960s through today, Defendants designed, manufactured, marketed, distributed, and/or sold AFFF products containing PFOS, PFOA, and/or their chemical precursors, and/or designed, manufactured, marketed, distributed, and/or sold the fluorosurfactants and/or perfluorinated chemicals (“PFCs”) contained in AFFF (collectively, “AFFF/Component Products”).

5. Defendants designed, manufactured, marketed, distributed, and/or sold AFFF/Component Products with the knowledge that these toxic compounds would be released into the environment during fire protection, training, and response activities, even when used as directed and intended by Defendants.

6. Since its creation in the 1960s, AFFF designed, manufactured, marketed, distributed, and/or sold by Defendants, and/or that contained fluorosurfactants and/or PFCs designed, manufactured, marketed, distributed, and/or sold by Defendants, used as directed and

intended by Defendants, and subsequently released into the environment during fire protection, training, and response activities, resulting in widespread PFAS contamination.

7. Pease Air Force Base (“Pease AFB”) occupies approximately 4,365 acres of land in southeastern New Hampshire. It is bordered on the east by the City of Portsmouth, on the north by the Town of Newington, and on the southeast by the Town of Greenland.

8. From approximately 1970 through 1991, AFFF was used to extinguish and prevent flammable liquid fires during the firefighting training exercises that were conducted at Pease AFB.

9. Defendants marketed and sold their products with knowledge that large quantities of AFFF, containing toxic PFAS, would be used in training exercises and in emergency situations at military bases, including Pease AFB, in such a manner that PFOA and PFOS would contaminate the air, soil, and groundwater.

10. Defendants marketed and sold their products with knowledge that large quantities of AFFF, containing toxic PFC’s, would be stored in fire suppressant systems and tanks in United States Air Force (“USAF”) Bases, including Pease AFB, and that such systems and storage were used and maintained in such a manner that dangerous chemicals would be released into the air, soil, and groundwater.

11. As a direct and proximate result of Defendants’ acts and omissions, Plaintiffs have suffered injuries and damages from the presence of PFAS in their drinking water during the time that they lived or worked at Pease AFB.

### **JURISDICTION AND VENUE**

12. Upon information and belief, this Court has personal jurisdiction over Defendants because each of them is doing business in New York by manufacturing, distributing, producing and marketing products, services and/or materials in this State and/or to this State.

13. At all relevant times to the Complaint, Defendants conducted business in New York and thereby availed themselves of the legal rights in New York.

14. Defendants have had systematic and continuous commercial contacts with New York to establish jurisdiction over them pursuant to CPLR § 302.

15. This Court has personal jurisdiction over the defendants as each of them are doing business in New York and engage in business in New York such that it is reasonably foreseeable that they would be subject to the jurisdiction of the courts of this State.

16. Defendant Dynax Corporation's principal place of business is in Elmsford, New York.

### **PARTIES**

#### **A. Plaintiff**

17. Deceased Plaintiff Kendall W. Brock was a resident 39 Munn Rd, Colebrook, NH 03576 from 2012 to 2017. Prior to that from 1971 to 2012, he resided at 410 High St, Candia, NH 3034. Both properties received their water from private wells.

18. Kendall W. Brock worked at Pease AFB from 1971 to 2002.

19. Kendall W. Brock was exposed to elevated levels of PFC's. As a result of his exposure to PFC's in the contaminated water supply, he was diagnosed with bladder cancer. Also,

he was at an increased risk of developing several health conditions, including but not limited to ulcerative colitis, effects on the liver and testicular and kidney cancer.

20. Kendall Brock died on June 30, 2017, due to complications from bladder cancer, which he developed as a direct result of his exposure to PFOS/A.

21. Plaintiff James George currently resides at 165 Old Lyme Dr. #7, Williamsville, NY 14221.

22. James George worked at Pease AFB from October 2008 to October 2015 as an Airman.

23. James George has been exposed to elevated levels of PFC's. As a result of his exposure to PFC's in the contaminated water supply, he has been diagnosed with thyroid disease. Also, he is at an increased risk of developing several health conditions, including but not limited to ulcerative colitis, effects on the liver and testicular and kidney cancer.

24. Plaintiff Glynn Hawley currently resides at 34 Forest Ave, Natick, MA 01760.

25. Glynn Hawley worked at Pease AFB from July 1985 to January 1991 in the Military Police Flight Line Patrol.

26. Glynn Hawley has been exposed to elevated levels of PFC's. As a result of his exposure to PFC's in the contaminated water supply, Glynn Hawley has been diagnosed with bladder cancer, and is at an increased risk of developing several health conditions, including but not limited to ulcerative colitis, effects on the liver and immune system, changes in thyroid hormone and testicular and kidney cancer.



27. Plaintiff Moses Linen currently resides at 235 NE Abaca Way, Jensen Beach, FL 34957.

28. Moses Linen worked at Pease AFB from 1978 to 1981 as a Security Specialist.

29. Moses Linen has been exposed to elevated levels of PFC's. As a result of his exposure to PFC's in the contaminated water supply, Moses Linen has been diagnosed with thyroid disease, and is at an increased risk of developing several health conditions, including but not limited to ulcerative colitis, effects on the liver and immune system, changes in thyroid hormone and testicular and kidney cancer.

30. Plaintiff Kimberly Neely currently resides at 20 Otis Pl, Newburyport, MA 01950.

31. Kimberly Neely worked at Pease Tradeport from September 2002 to June 2004.

32. Kimberly Neely has been exposed to elevated levels of PFC's. As a result of her exposure to PFC's in the contaminated water supply, Kimberly Neely has been diagnosed with thyroid disease, and is at an increased risk of developing several health conditions, including but not limited to ulcerative colitis, effects on the liver and immune system, and kidney cancer.

**B. Defendants**

33. The term "Defendants" refers to all Defendants named herein jointly and severally.

i. The AFFF Defendants

34. The term "**AFFF Defendants**" refers collectively to Defendants 3M Company, Angus International Safety Group, Ltd., Amerex Corporation, Buckeye Fire Equipment Company, Carrier Global Corporation, Central Sprinkler, LLC, Chemguard Inc., Fire Products GP Holding,

LLC, Johnson Controls International PLC, Kidde-Fenwal, Inc., National Foam, Inc., and Tyco Fire Products L.P.,

35. **Defendant The 3M Company f/k/a Minnesota Mining and Manufacturing Co. (“3M”)** is a corporation organized and existing under the laws of the State of Delaware, with its principal place of business located at 3M Center, St. Paul, Minnesota 55144-1000.

36. Beginning before 1970 and until at least 2002, 3M designed, manufactured, marketed, distributed, and sold AFFF containing PFAS, including but not limited to PFOA and PFOS.

37. **Defendant Amerex Corporation (“Amerex”)** is a corporation organized and existing under the laws of the State of Alabama, with its principal place of business located at 7595 Gadsden Highway, Trussville, AL 35173.

38. Amerex is a manufacturer of firefighting products. Beginning in 1971, it was a manufacturer of hand portable and wheeled extinguishers for commercial and industrial applications.

39. In 2011, Amerex acquired Solberg Scandinavian AS, one of the largest manufacturers of AFFF products in Europe.

40. On information and belief, beginning in 2011, Amerex designed, manufactured, marketed distributed, and sold AFFF containing PFAS, including but not limited to PFOA and PFOS.

41. **Defendant Tyco Fire Products LP (“Tyco”)** is a limited partnership organized under the laws of the State of Delaware, with its principal place of business located at One Stanton Street, Marinette, Wisconsin 54143-2542.

42. Tyco is the successor in interest of The Ansul Company (“Ansul”), having acquired Ansul in 1990.

43. Beginning in or around 1975, Ansul designed, manufactured, marketed, distributed, and sold AFFF containing PFAS, including but not limited to PFOA and PFOS.

44. After Tyco acquired Ansul in 1990, Tyco/Ansul continued to design, manufacture, market, distribute, and sell AFFF products containing PFAS, including but not limited to PFOA and PFOS.

45. **Defendant Chemguard, Inc. (“Chemguard”)** is a corporation organized under the laws of the State of Texas, with its principal place of business located at One Stanton Street, Marinette, Wisconsin 54143.

46. On information and belief, Chemguard designed, manufactured, marketed, distributed, and sold AFFF products containing PFAS, including but not limited to PFOA and PFOS.

47. On information and belief, Chemguard was acquired by Tyco International Ltd. in 2011.

48. On information and belief, Tyco International Ltd. later merged into its subsidiary Tyco International plc in 2014 to change its jurisdiction of incorporation from Switzerland to Ireland.

49. **Defendant Buckeye Fire Equipment Company (“Buckeye”)** is a corporation organized under the laws of the State of Ohio, with its principal place of business located at 110 Kings Road, Kings Mountain, North Carolina 28086.

50. On information and belief, Buckeye designed, manufactured, marketed, distributed, and sold AFFF products containing PFAS, including but not limited to PFOA and PFOS.

51. **Defendant National Foam, Inc. (“National Foam”)** is a corporation organized under the laws of the State of Delaware, with its principal place of business located at 141 Junny Road, Angier, North Carolina 27501.

52. Beginning in or around 1973, National Foam designed, manufactured, marketed, distributed, and sold AFFF containing PFAS, including but not limited to PFOA and PFOS.

53. On information and belief, National Foam currently manufactures the Angus brand of AFFF products and is a subsidiary of Angus International Safety Group.

54. On information and belief, National Foam merged with Chubb Fire Ltd. to form Chubb National Foam, Inc. in or around 1988.

55. On information and belief, Chubb is or has been composed of different subsidiaries and/or divisions, including but not limited to, Chubb Fire & Security Ltd., Chubb Security, PLC, Red Hawk Fire & Security, LLC, and/or Chubb National Foam, Inc. (collectively referred to as “Chubb”).

56. On information and belief, Chubb was acquired by Williams Holdings in 1997.

57. On information and belief, Angus Fire Armour Corporation had previously been acquired by Williams Holdings in 1994.

58. On information and belief, Williams Holdings was demerged into Chubb and Kidde P.L.C. in or around 2000.

59. On information and belief, when Williams Holdings was demerged, Kidde P.L.C. became the successor in interest to National Foam System, Inc. and Angus Fire Armour Corporation.

60. On information and belief, Kidde P.L.C. was acquired by United Technologies Corporation in or around 2005.

61. On information and belief, Angus Fire Armour Corporation and National Foam separated from United Technologies Corporation in or around 2013.

62. **Defendant Kidde-Fenwal, Inc. (“Kidde-Fenwal”)** is a corporation organized under the laws of the State of Delaware, with its principal place of business at One Financial Plaza, Hartford, Connecticut 06101.

63. On information and belief, Kidde-Fenwal was an operating subsidiary of Kidde P.L.C. and manufactured AFFF following Kidde P.L.C.’s acquisition by United Technologies Corporation.

64. On information and belief, Kidde-Fenwal is the entity that divested the AFFF business unit now operated by National Foam in 2013.

65. **Defendant Carrier Global Corporation (“Carrier”)** is a corporation organized under the laws of the State of Delaware, with its principal place of business at 13995 Pasteur Boulevard, Palm Beach Gardens, Florida 33418.

66. On information and belief, Carrier was formed in March 2020 when United Technologies Corporation spun off its fire and security business before it merged with Raytheon Company in April 2020.

67. On information and belief, Kidde-Fenwal became a subsidiary of Carrier when United Technologies Corporation spun off its fire and security business in March 2020.

68. On information and belief, the AFFF Defendants designed, manufactured, marketed, distributed, and sold AFFF products containing PFOS, PFOA, and/or their chemical precursors that were stored, handled, used, trained with, tested equipment with, otherwise discharged, and/or disposed at Pease AFB.

ii. The Fluorosurfactant Defendants

69. The term “**Fluorosurfactant Defendants**” refers collectively to Defendants 3M, , Arkema Inc., BASF Corporation, ChemDesign Products Incorporated, Chemguard Inc., Deepwater Chemicals, Inc., E.I. DuPont de Nemours and Company, The Chemours Company, The Chemours Company FC, LLC, DuPont de Nemours Inc., and Dynax Corporation.

70. **Defendant Arkema Inc.** is a corporation organized and existing under the laws of Pennsylvania, with its principal place of business at 900 First Avenue, King of Prussia, PA 19406.

71. Arkema Inc. develops specialty chemicals and polymers.

72. Arkema, Inc. is an operating subsidiary of Arkema France, S.A.

73. On information and belief, Arkema Inc. designed, manufactured, marketed, distributed, and sold fluorosurfactants containing PFOS, PFOA, and/or their chemical precursors for use in AFFF products.

74. **Defendant BASF Corporation (“BASF”)** is a corporation organized under the laws of the State of Delaware, with its principal place of business located at 100 Park Avenue, Florham Park, New Jersey 07932.

75. On information and belief, BASF is the successor-in-interest to Ciba. Inc. (f/k/a Ciba Specialty Chemicals Corporation).

76. On information and belief, Ciba Inc. designed, manufactured, marketed, distributed, and sold fluorosurfactants containing PFOS, PFOA, and/or their chemical precursors for use in AFFF products.

77. **Defendant ChemDesign Products Inc. (“ChemDesign”)** is a corporation organized under the laws of Delaware, with its principal place of business located at 2 Stanton Street, Marinette, WI, 54143.

78. On information and belief, ChemDesign designed, manufactured, marketed, distributed, and sold fluorosurfactants containing PFOS, PFOA, and/or their chemical precursors for use in AFFF products

79. **Defendant Deepwater Chemicals, Inc. (“Deepwater”)** is a corporation organized under the laws of Delaware, with its principal place of business located at 196122 E County Road 40, Woodward, OK, 73801.

80. On information and belief, Deepwater Chemicals designed, manufactured, marketed, distributed, and sold fluorosurfactants containing PFOS, PFOA, and/or their chemical precursors for use in AFFF products

81. **Defendant Dynax Corporation (“Dynax”)** is a corporation organized under the laws of the State of Delaware, with its principal place of business located at 103 Fairview Park Drive, Elmsford, New York 10523.

82. On information and belief, Dynax entered into the AFFF market on or about 1991 and quickly became a leading global producer of fluorosurfactants and fluorochemical stabilizers containing PFOS, PFOA, and/or their chemical precursors.

83. On information and belief, Dynax designed, manufactured, marketed, distributed, and sold fluorosurfactants and fluorochemical stabilizers containing PFOS, PFOA, and/or their chemical precursors for use in AFFF products.

84. **Defendant E.I. du Pont de Nemours & Company (“DuPont”)** is a corporation organized under the laws of the State of Delaware, with its principal place of business located at 974 Centre Road, Wilmington, Delaware 19805.

85. **Defendant The Chemours Company (“Chemours Co.”)** is a limited liability company organized under the laws of the State of Delaware, with its principal place of business located at 1007 Market Street, P.O. Box 2047, Wilmington, Delaware, 19899.

86. In 2015, DuPont spun off its performance chemicals business to Chemours Co., along with vast environmental liabilities which Chemours Co. assumed, including those related to PFOS and PFOA and fluorosurfactants. On information and belief, Chemours Co. has supplied fluorosurfactants containing PFOS and PFOA, and/or their chemical precursors to manufacturers of AFFF products.



87. On information and belief, Chemours Co. was incorporated as a subsidiary of DuPont as of April 30, 2015. From that time until July 2015, Chemours Co. was a wholly-owned subsidiary of DuPont.

88. In July 2015, DuPont spun off Chemours Co. and transferred to Chemours Co. its “performance chemicals” business line, which includes its fluoroproducts business, distributing shares of Chemours Co. stock to DuPont stockholders, and Chemours Co. has since been an independent, publicly-traded company.

89. **Defendant The Chemours Company FC, LLC (“Chemours FC”)** is a limited liability company organized under the laws of the State of Delaware, with its principal place of business located at 1007 Market Street, Wilmington, Delaware, 19899.

90. **Defendant Corteva, Inc. (“Corteva”)** is a corporation organized and existing under the laws of Delaware, with its principal place of business at 974 Centre Rd., Wilmington, Delaware 19805.

91. **Defendant Dupont de Nemours Inc. f/k/a DowDuPont, Inc. (“Dupont de Nemours Inc.”)** is a corporation organized and existing under the laws of Delaware, with its principal place of business at 974 Centre Road, Wilmington, Delaware 19805 and 2211 H.H. Dow Way, Midland, Michigan 48674.

92. On June 1, 2019, DowDuPont separated its agriculture business through the spin-off of Corteva.

93. Corteva was initially formed in February 2018. From that time until June 1, 2019, Corteva was a wholly-owned subsidiary of DowDuPont.

94. On June 1, 2019, DowDuPont distributed to DowDuPont stockholders all issued and outstanding shares of Corteva common stock by way of a pro-rata dividend. Following that distribution, Corteva became the direct parent of E. I. Du Pont de Nemours & Co.

95. Corteva holds certain DowDuPont assets and liabilities, including DowDuPont's agriculture and nutritional businesses.

96. On June 1, 2019, DowDuPont, the surviving entity after the spin-off of Corteva and of another entity known as Dow, Inc., changed its name to DuPont de Nemours, Inc., to be known as DuPont ("New DuPont"). New DuPont retained assets in the specialty products business lines following the above-described spin-offs, as well as the balance of the financial assets and liabilities of E.I DuPont not assumed by Corteva.

97. Defendants E. I. Du Pont de Nemours and Company; The Chemours Company; The Chemours Company FC, LLC; Corteva, Inc.; and DuPont de Nemours, Inc. are collectively referred to as "DuPont" throughout this Complaint.

98. On information and belief, DuPont designed, manufactured, marketed, distributed, and sold fluorosurfactants containing PFOS, PFOA, and/or their chemical precursors for use in AFFF products.

99. On information and belief, 3M and Chemguard also designed, manufactured, marketed, distributed, and sold fluorosurfactants containing PFOS, PFOA, and/or their chemical precursors for use in AFFF products.

100. On information and belief, the Fluorosurfactant Defendants designed, manufactured, marketed, distributed, and sold fluorosurfactants containing PFOS, PFOA, and/or

their chemical precursors for use in AFFF products that were stored, handled, used, trained with, tested equipment with, otherwise discharged, and/or disposed at Pease AFB.

iii. The PFC Defendants

101. The term **“PFC Defendants”** refers collectively to 3M, AGC Chemicals Americas Inc., Archroma U.S. Inc., ChemDesign Products Inc., Chemicals, Inc., Clariant Corporation, Deepwater Chemicals, Inc., E. I. DuPont de Nemours and Company, The Chemours Company, The Chemours Company FC, LLC, Corteva, Inc., DuPont de Nemours Inc., and Nation Ford Chemical Company.

102. **Defendant AGC Chemicals Americas, Inc. (“AGC”)** is a corporation organized and existing under the laws of Delaware, having its principal place of business at 55 East Uwchlan Avenue, Suite 201, Exton, PA 19341.

103. On information and belief, AGC Chemicals Americas, Inc. was formed in 2004 and is a subsidiary of AGC Inc., a foreign corporation organized under the laws of Japan, with its a principal place of business in Tokyo, Japan.

104. AGC manufactures specialty chemicals. It offers glass, electronic displays, and chemical products, including resins, water and oil repellants, greenhouse films, silica additives, and various fluorointermediates.

105. On information and belief, AGC designed, manufactured, marketed, distributed, and sold PFCs containing PFOS, PFOA, and/or their chemical precursors for use in manufacturing the fluorosurfactants used in AFFF products.

106. **Defendant Archroma U.S., Inc. (“Archroma”)** is a corporation organized and existing under the laws of Delaware, with its a principal place of business at 5435 77 Center Drive, Charlotte, North Carolina 28217.

107. On information and belief, Archroma was formed in 2013 when Clariant Corporation divested its textile chemicals, paper specialties, and emulsions business to SK Capital Partners.

108. On information and belief, Archroma designed, manufactured, marketed, distributed, and sold PFCs containing PFOS, PFOA, and/or their chemical precursors for use in manufacturing the fluorosurfactants used in AFFF products.

109. **Defendant Chemicals, Inc. (“Chemicals, Inc.”)** is a corporation organized and existing under the laws of Texas, with its principal place of business located at 12321 Hatcherville, Baytown, TX 77520.

110. On information and belief, Chemicals, Inc. supplied PFCs containing PFOS, PFOA, and/or their chemical precursors for use in manufacturing the fluorosurfactants used in AFFF products.

111. **Defendant Clariant Corporation (“Clariant”)** is a corporation organized and existing under the laws of New York, with its principal place of business at 4000 Monroe Road, Charlotte, North Carolina 28205.

112. On information and belief, Clariant is the successor in interest to the specialty chemicals business of Sandoz Chemical Corporation (“Sandoz”). On information and belief, Sandoz spun off its specialty chemicals business to form Clariant in 1995.

113. On information and belief, Clariant supplied PFCs containing PFOS, PFOA, and/or their chemical precursors for use in manufacturing the fluorosurfactants used in AFFF products.

114. **Defendant Nation Ford Chemical Co. (“Nation Ford”)** is a corporation organized and existing under the laws of South Carolina, with its principal place of business located at 2300 Banks Street, Fort Mill, SC 29715.

115. On information and belief, Nation Ford supplied PFCs containing PFOS, PFOA, and/or their chemical precursors for use in manufacturing the fluorosurfactants used in AFFF products.

116. On information and belief, 3M, ChemDesign, Deepwater Chemicals, and DuPont also supplied PFCs containing PFOS, PFOA, and/or their chemical precursors for use in manufacturing the fluorosurfactants used in AFFF products.

117. On information and belief, the Fluorochemical Defendants supplied PFCs containing PFOS, PFOA, and/or their chemical precursors for use in manufacturing the fluorosurfactants used in AFFF products that were stored, handled, used, trained with, tested equipment with, otherwise discharged, and/or disposed at Pease AFB.

iv. Doe Defendants 1-20

118. Doe Defendants 1-20 are unidentified entities or persons whose names are presently unknown and whose actions, activities, omissions (a) may have permitted, caused and/or contributed to the contamination of Plaintiff’s water sources or supply wells; or (b) may be vicariously responsible for entities or persons who permitted, caused and/or contributed to the contamination of Plaintiff’s water sources or supply wells; or (c) may be successors in interest to

entities or persons who permitted, caused and/or permitted , contributed to the contamination of Plaintiff's water sources or supply wells. After reasonable search and investigation to ascertain the Doe Defendants actual names, the Doe Defendants' actual identities are unknown to Plaintiff as they are not linked with any of the Defendants on any public source.

119. The Doe Defendants 1-20 either in their own capacity or through a party they are liable for: (1) designed, manufactured, marketed, distributed, and/or sold AFFF products containing PFOS, PFOA, and/or their chemical precursors, and/or designed, manufactured, marketed, distributed, and/or sold the fluorosurfactants and/or PFCs contained in AFFF/Component Products; or (2) used, handled, transported, stored, discharged, disposed of, designed, manufactured, marketed, distributed, and/or sold PFOS, PFOA, and/or their chemical precursors, or other non-AFFF products containing PFOS, PFOA, and/or their chemical precursors; or (3) failed to timely perform necessary and reasonable response and remedial measures to releases of PFOS, PFOA, and/or their chemical precursors, or other non-AFFF products containing PFOS, PFOA, and/or their chemical precursors in to the environment in which Plaintiff's water supplies and well exist.

120. All Defendants, at all times material herein, acted by and through their respective agents, servants, officers and employees, actual or ostensible, who then and there were acting within the course and scope of their actual or apparent agency, authority or duties. Defendants are liable based on such activities, directly and vicariously.

121. Defendants represent all or substantially all of the market for AFFF/Component Products at Pease AFB.

**FACTUAL ALLEGATIONS RELEVANT TO ALL CAUSES OF ACTION**

**A. PFOA and PFOS and Their Risk to Public Health**

122. PFAS are chemical compounds containing fluorine and carbon. These substances have been used for decades in the manufacture of, among other things, household and commercial products that resist heat, stains, oil, and water. These substances are not naturally occurring and must be manufactured.

123. The two most widely studied types of these substances are PFOA and PFOS.

124. PFOA and PFOS have unique properties that cause them to be: (i) mobile and persistent, meaning that they readily spread into the environment where they break down very slowly; (ii) bioaccumulative and biomagnifying, meaning that they tend to accumulate in organisms and up the food chain; and (iii) toxic, meaning that they pose serious health risks to humans and animals.

125. PFOA and PFOS easily dissolve in water, and thus they are mobile and easily spread in the environment. PFOA and PFOS also readily contaminate soils and leach from the soil into groundwater, where they can travel significant distances.

126. PFOA and PFOS are characterized by the presence of multiple carbon-fluorine bonds, which are exceptionally strong and stable. As a result, PFOA and PFOS are thermally, chemically, and biologically stable. They resist degradation due to light, water, and biological processes.

127. Bioaccumulation occurs when an organism absorbs a substance at a rate faster than the rate at which the substance is lost by metabolism and excretion. Biomagnification occurs when

the concentration of a substance in the tissues of organisms increases as the substance travels up the food chain.

128. PFOA and PFOS bioaccumulate/biomagnify in numerous ways. First, they are relatively stable once ingested, so that they bioaccumulate in individual organisms for significant periods of time. Because of this stability, any newly ingested PFOA and PFOS will be added to any PFOA and PFOS already present. In humans, PFOA and PFOS remain in the body for years.

129. PFOA and PFOS biomagnify up the food chain. This occurs, for example, when humans eat fish that have ingested PFOA and/or PFOS.

130. The chemical structure of PFOA and PFOS makes them resistant to breakdown or environmental degradation. As a result, they are persistent when released into the environment.

131. Exposure to PFAS is toxic and poses serious health risks to humans and animals.

132. PFAS are readily absorbed after consumption or inhalation and accumulate primarily in the bloodstream, kidney, and liver.

**B. Defendants' Manufacture and Sale of AFFF/Component Products**

133. AFFF is a type of water-based foam that was first developed in the 1960s to extinguish hydrocarbon fuel-based fires.

134. AFFF is a Class-B firefighting foam. It is mixed with water and used to extinguish fires that are difficult to fight, particularly those that involve petroleum or other flammable liquids.

135. AFFF is synthetically formed by combining fluorine-free hydrocarbon foaming agents with fluorosurfactants. When mixed with water, the resulting solution produces an aqueous



film that spreads across the surface of hydrocarbon fuel. This film provides fire extinguishment and is the source of the designation aqueous film-forming foam.

136. Beginning in the 1960s, the AFFF Defendants designed, manufactured, marketed, distributed, and/or sold AFFF products that used fluorosurfactants containing either PFOS, PFOA, or the chemical precursors that degrade into PFOS and PFOA.

137. AFFF can be made without the fluorosurfactants that contain PFOA, PFOS, and/or their precursor chemicals. Fluorine-free firefighting foams, for instance, do not release PFOA, PFOS, and/or their precursor chemicals into the environment.

138. AFFF that contains fluorosurfactants, however, is better at extinguishing hydrocarbon fuel-based fires due to their surface-tension lowering properties, essentially smothering the fire and starving it of oxygen.

139. The fluorosurfactants used in 3M's AFFF products were manufactured by 3M's patented process of electrochemical fluorination ("ECF").

140. The fluorosurfactants used in other AFFF products sold by the AFFF Defendants were manufactured by the Fluorosurfactant Defendants through the process of telomerization.

141. The PFCs the Fluorosurfactant Defendants needed to manufacture those fluorosurfactants contained PFOS, PFOA, and/or their chemical precursors and were designed, manufactured, marketed, distributed and/or sold by the PFC Defendants.

142. On information and belief, the PFC and Fluorosurfactant Defendants were aware that the PFCs and fluorosurfactants they designed, manufactured, marketed, distributed, and/or

sold would be used in the AFFF products designed, manufactured, marketed, distributed, and/or sold by the AFFF Defendants.

143. On information and belief, the PFC and Fluorosurfactant Defendants designed, manufactured, marketed, distributed, and/or sold the PFC and/or fluorosurfactants contained in the AFFF products discharged into the environment at Pease AFB during fire protection, training, and response activities, resulting in widespread PFAS contamination.

144. On information and belief, the AFFF Defendants designed, manufactured, marketed, distributed, and/or sold the AFFF products discharged into the environment at Pease AFB during fire protection, training, and response activities, resulting in widespread PFAS contamination.

**C. Defendants' Knowledge of the Threats to Public Health and the Environment Posed by PFOS and PFOA**

145. On information and belief, by at least the 1970s 3M and DuPont knew or should have known that PFOA and PFOS are mobile and persistent, bioaccumulative and biomagnifying, and toxic.

146. On information and belief, 3M and DuPont concealed from the public and government agencies its knowledge of the threats to public health and the environment posed by PFOA and PFOS.

147. Some or all of the Defendants understood how stable the fluorinated surfactants used in AFFF are when released into the environment from their first sale to a customer, yet they failed to warn their customers or provide reasonable instruction on how to manage wastes generated from their products.

i. 1940s and 1950s: Early Warnings About the Persistence of AFFF

148. In 1947, 3M started its fluorochemical program, and within four years, it began selling its PFOA to DuPont. The persistence and contaminating nature of the fluorosurfactants contained in AFFF products were understood prior to their commercial application at 3M's Cottage Grove facility in Minnesota.

149. The inventor of 3M's ECF process was J.H. Simons. Simons' 1948 patent for the ECF process reported that PFCs are "non-corrosive, and of little chemical reactivity," and "do not react with any of the metals at ordinary temperatures and react only with the more chemically reactive metals such as sodium, at elevated temperatures."<sup>1</sup>

150. Simons further reported that fluorosurfactants produced by the ECF process do not react with other compounds or reagents due to the blanket of fluorine atoms surrounding the carbon skeleton of the molecule. 3M understood that the stability of the carbon-to-fluorine bonds prevented its fluorosurfactants from undergoing further chemical reactions or degrading under natural processes in the environment.<sup>2</sup>

151. The thermal stability of 3M's fluorosurfactants was also understood prior to commercial production. Simons' patent application further discloses that the fluorosurfactants produced by the ECF process were thermally stable at temperatures up to 750° C (1382° F).

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<sup>1</sup> Simons, J. H., Fluorination of Organic Compounds, U.S. Patent No. 2,447,717. August 24, 1948, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1005.pdf>.

<sup>2</sup> Simons, J. H., 1950. Fluorocarbons and Their Production. *Fluorine Chemistry*, 1(12): 401-422, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX3008.pdf>.

Additional research by 3M expanded the understanding of the thermal stability of perfluorocarbon compounds.<sup>3</sup>

152. Nowhere in any Material Safety Data Sheet for any of Defendants' AFFF/Component Products is information on the thermal stability of those products disclosed. Failure to disclose knowledge of the stability of the PFCs and fluorosurfactants used in AFFF products to customers is a failure to warn just how indestructible the AFFF's ingredients are when released to unprotected water sources and even treatment plants.

ii. 1960s: AFFF's Environmental Hazards Come Into Focus

153. By at least the end of the 1960s, additional research and testing performed by 3M and DuPont indicated that fluorosurfactants, including at least PFOA, because of their unique chemical structure, were resistant to environmental degradation and would persist in the environment essentially unaltered if allowed to enter the environment.

154. One 3M employee wrote in 1964: "This chemical stability also extends itself to all types of biological processes; there are no known biological organisms that are able to attack the carbon-fluorine bond in a fluorocarbon."<sup>4</sup> Thus, 3M knew by the mid-1960s that its surfactants were immune to chemical and biological degradation in soils and groundwater.

155. 3M also knew by 1964 that when dissolved, fluorocarbon carboxylic acids and fluorocarbon sulfonic acids dissociated to form highly stable perfluorocarboxylate and

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<sup>3</sup> Bryce, T. J., 1950. Fluorocarbons - Their Properties and Wartime Development. *Fluorine Chemistry*, 1(13): 423-462.

<sup>4</sup> Bryce, H.G., *Industrial and Utilitarian Aspects of Fluorine Chemistry* (1964), *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX3022.pdf>.

perfluorosulfonate ions. Later studies by 3M on the adsorption and mobility of FC-95 and FC-143 (the ammonium salt of PFOA) in soils indicated very high solubility and very high mobility in soils for both compounds.<sup>5</sup>

iii. 1970s: Internal Studies Provide Evidence of Environmental and Health Risks

156. By 1950, 3M knew that the fluorosurfactants used in its AFFF product(s) would not degrade when released to the environment, but would remain intact and persist. Two decades later—and after the establishment of a robust market of AFFFs using fluorosurfactants—3M finally got around to looking at the environmental risks that fluorosurfactants posed.

157. An internal memo from 3M in 1971 states that “the thesis that there is ‘no natural sink’ for fluorocarbons obviously demands some attention.”<sup>6</sup> Hence, 3M understood at the very least that the fluorosurfactant used in its AFFF products would, in essence, never degrade once it was released into the environment.

158. By the mid-1970s, 3M and Ansul (and possibly other Defendants) had an intimate understanding of the persistent nature of PFCs. A 1976 study, for example, observed no biodegradation of FC-95, the potassium salt of PFOS; a result 3M characterized as “unsurprising” in light of the fact that “[b]iodegradation of FC 95 is improbable because it is completely fluorinated.”<sup>7</sup>

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<sup>5</sup> Technical Report Summary re : Adsorption of FC 95 and FC143 on Soil, Feb. 27, 1978, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1158.pdf>.

<sup>6</sup> Memorandum from H.G. Bryce to R.M. Adams re : Ecological Aspects of Fluorocarbons, Sept. 13, 1971, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1088.pdf>.

<sup>7</sup> Technical Report Summary, August 12, 1976 [3MA01252037].

159. In 1977, Ansul authored a report titled “Environmentally Improved AFFF,” which acknowledged that releasing AFFF into the environment could pose potential negative impacts to groundwater quality.<sup>8</sup> Ansul wrote: “The purpose of this work is to explore the development of experimental AFFF formulations that would exhibit reduced impact on the environment while retaining certain fire suppression characteristic . . . improvements [to AFFF formulations] are desired in the environmental area, i.e., development of compositions that have a reduced impact on the environment without loss of fire suppression effectiveness.” Thus, Ansul knew by the mid-1970s that the environmental impact of AFFF needed to be reduced, yet there is no evidence that Ansul (or any other Defendant) ever pursued initiatives to do so.

160. A 1978 3M biodegradation study likewise reported that an “extensive study strongly suggest[ed]” one of its PFCs is “likely to persist in the environment for extended period unaltered by metabolic attack.”<sup>9</sup> A year later, a 3M study reported that one of its fluorosurfactants “was found to be completely resistant to biological test conditions,” and that it appeared waterways were the fluorosurfactant’s “environmental sink.”<sup>10</sup>

161. In 1979, 3M also completed a comprehensive biodegradation and toxicity study covering investigations between 1975 and 1978.<sup>11</sup> More than a decade after 3M began selling

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<sup>8</sup> Ansul Co., Final Report: Environmentally Improved AFFF, N00173-76-C-0295, Marinette, WI, Dec. 13, 1977, *available at* <https://apps.dtic.mil/dtic/tr/fulltext/u2/a050508.pdf>.

<sup>9</sup> Technical Report Summary re : Fate of Fluorochemicals in the Environment, Biodegradation Studies of Fluorocarbons - II, Jan. 1, 1978, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1153.pdf>.

<sup>10</sup> Technical Report Summary re : Fate of Fluorochemicals in the Environment, Biodegradation Studies of Fluorocarbons - III, July 19, 1978, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1179.pdf>.

<sup>11</sup> Technical Report Summary, Final Comprehensive Report on FM 3422, Feb. 2, 1979, *available at*

AFFF containing fluorosurfactants it wrote: “there has been a general lack of knowledge relative to the environmental impact of these chemicals.” The report ominously asked, “If these materials are not biodegradable, what is their fate in the environment?”

162. During the 1970s, 3M also learned that the fluorosurfactants used in AFFF accumulated in the human body and were “even more toxic” than previously believed.

163. In 1975, 3M learns that PFAS was present in the blood of the general population.<sup>12</sup> Since PFOA and PFOS are not naturally occurring, this finding should have alerted 3M to the possibility that their products were a source of this PFOS. The finding also should have alerted 3M to the possibility that PFOS might be mobile, persistent, bioaccumulative, and biomagnifying, as those characteristics could explain how PFOS from 3M's products ended up in human blood.

164. In 1976, 3M found PFAS in the blood of its workers at levels “up to 1000 times ‘normal’ amounts of organically bound fluorine in their blood.”<sup>13</sup> This finding should have alerted 3M to the same issues raised by the prior year’s findings.

165. Studies by 3M in 1978 showed that PFOA reduced the survival rate of fathead minnow fish eggs,<sup>14</sup> that PFOS was toxic to monkeys,<sup>15</sup> and that PFOS and PFOA were toxic to

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<https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX2563.pdf>.

<sup>12</sup> Memorandum from G.H. Crawford to L.C. Krogh et al. re: Fluorocarbons in Human Blood Plasma, Aug. 20, 1975, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1118.pdf>.

<sup>13</sup> 3M Chronology – Fluorochemicals in Blood, Aug. 26, 1977, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1144.pdf>.

<sup>14</sup> The Effects of Continuous Aqueous Exposure to 78.03 on Hatchability of Eggs and Growth and Survival of Fry of Fathead Minnow, June 1978, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1176.pdf>.

<sup>15</sup> Ninety-Day Subacute Rhesus Monkey Toxicity Study, Dec. 18, 1978, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1191.pdf>; Aborted FC95 Monkey Study,

rats.<sup>16</sup> In the study involving monkeys and PFOS, all of the monkeys died within days of ingesting food contaminated with PFOS.

166. In 1979, 3M and DuPont discussed 3M's discovery of PFOA in the blood of its workers and came to the same conclusion that there was "no reason" to notify the EPA of the finding.<sup>17</sup>

iv. 1980s and 1990s: Evidence of AFFF's Health Risks Continues to Mount

167. By at least the end of the 1980s, additional research and testing performed by Defendants, including at least 3M and DuPont, indicated that elevated incidence of certain cancers and other adverse health effects, including elevated liver enzymes and birth defects, had been observed among workers exposed to such materials, including at least PFOA, but such data was not published, provided to governmental entities as required by law, or otherwise publicly disclosed at the time.

168. In 1981, DuPont tested for and found PFOA in the blood of female plant workers Parkersburg, West Virginia. DuPont observed and documented pregnancy outcomes in exposed

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Jan. 2, 1979, available at <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1193.pdf>.

<sup>16</sup> Acute Oral Toxicity (LD<sub>50</sub>) Study in Rats (FC-143), May 5, 1978, available at <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1170.pdf>; FC-95, FC-143 and FM-3422 – 90 Day Subacute Toxicity Studies Conducted at IRDC – Review of Final Reports and Summary, Mar. 20, 1979, available at <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1199.pdf>.

<sup>17</sup> Memorandum from R.A. Prokop to J.D. Lazerte re: Disclosure of Information on Levels of Fluorochemicals in Blood, July 26, 1979, available at <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX2723.pdf>.



workers, finding two of seven children born to female plant workers between 1979 and 1981 had birth defects—one an “unconfirmed” eye and tear duct defect, and one a nostril and eye defect.<sup>18</sup>

169. In 1983, 3M researchers concluded that concerns about PFAS “give rise to concern for environmental safety,” including “legitimate questions about the persistence, accumulation potential, and ecotoxicity of fluorochemicals in the environment.”<sup>19</sup> That same year, 3M completed a study finding that PFOS caused the growth of cancerous tumors in rats.<sup>20</sup> This finding was later shared with DuPont and led them to consider whether “they may be obliged under their policy to call FC-143 a carcinogen in animals.”<sup>21</sup>

170. In 1984, 3M documented a trend of increasing levels of PFOS in the bodies of 3M workers, leading one of the company’s medical officers to warn in an internal memo: “we must view this present trend with serious concern. It is certainly possible that . . . exposure opportunities are providing a potential uptake of fluorochemicals that exceeds excretion capabilities of the body.”<sup>22</sup>

171. A 1997 material safety data sheet (“MSDS”) for a non-AFFF product made by 3M listed its only ingredients as water, PFOA, and other perfluoroalkyl substances and warned that the

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<sup>18</sup> C-8 Blood Sampling Results, *available at* <http://tiny.cc/v8z1mz>.

<sup>19</sup> 3M Environmental Laboratory (EE & PC), Fate of Fluorochemicals - Phase II, May 20, 1983, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1284.pdf>.

<sup>20</sup> Two Year Oral (Diet) Toxicity/Carcinogenicity Study of Fluorochemical FC-143 in Rats, Volume 1 of 4, Aug. 29, 1987, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1337.pdf>.

<sup>21</sup> Memorandum from R.G. Perkins to F.D. Griffith re: Summary of the Review of the FC-143 Two-Year Feeder Study Report to be presented at the January 7, 1988 meeting with DuPont, January 5, 1988, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1343.pdf>.

<sup>22</sup> Memorandum from D.E. Roach to P.F. Riehle re: Organic Fluorine Levels, Aug. 31, 1984, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1313.pdf>.

product includes “a chemical which can cause cancer.” The MSDS cited “1983 and 1993 studies conducted jointly by 3M and DuPont” as support for this statement. On information and belief, the MSDS for 3M’s AFFF products did not provide similar warnings or information.

v. Defendants Hid What They Knew from the Government and the Public.

172. Federal law requires chemical manufacturers and distributors to immediately notify the EPA if they have information that “reasonably supports the conclusion that such substance or mixture presents a substantial risk of injury to health or the environment.” Toxic Substances Control Act (“TSCA”) § 8(e), 15 U.S.C. § 2607(e)

173. In April 2006, 3M agreed to pay EPA a penalty of more than \$1.5 million after being cited for 244 violations of the TSCA, which included violations for failing to disclose studies regarding PFOS, PFOA, and other PFCs dating back decades.

174. Likewise, in December 2005, the EPA announced it was imposing the “Largest Environmental Administrative Penalty in Agency History” against DuPont based on evidence that it violated the TSCA by concealing the environmental and health effects of PFOA.

175. On information and belief, Defendants knew or should have known that AFFF containing PFOA or PFOS would very likely injure and/or threaten public health and the environment, even when used as intended or directed.

176. Defendants failed to warn of these risks to the environment and public health, including the impact of their AFFF/Component Products on the quality of unprotected water sources.

177. Defendants were all sophisticated and knowledgeable in the art and science of designing, formulating, and manufacturing AFFF/Component Products. They understood far more about the properties of their AFFF/Component Products—including the potential hazards they posed to human health and the environment—than any of their customers. Still, Defendants declined to use their sophistication and knowledge to design safer products.

**D. The Impact of PFOS and PFOA on the Environment and Human Health Is Finally Revealed**

178. As discussed above, neither 3M, DuPont, nor, on information and belief, any other Defendant complied with their obligations to notify EPA about the “substantial risk of injury to health or the environment” posed by their AFFF/Component Products. *See* TSCA § 8(e).

179. Despite decades of research, 3M first shared its concerns with EPA in the late 1990s. In a May 1998 report submitted to EPA, “3M chose to report simply that PFOS had been found in the blood of animals, which is true but omits the most significant information,” according to a former 3M employee.<sup>23</sup>

180. On information and belief, 3M began in 2000 to phase out its production of products that contained PFOS and PFOA in response to pressure from the EPA.

181. Once the truth about PFOS and PFOA was revealed, researchers began to study the environmental and health effects associated with them, including a “C8 Science Panel” formed out of a class action settlement arising from contamination from DuPont’s Washington Works located in Wood County, West Virginia.

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<sup>23</sup> Letter from R. Purdy, Mar. 28, 1999, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1001.pdf>.

182. The C8 panel consisted of three epidemiologists specifically tasked with determining whether there was a probable link between PFOA exposure and human diseases. In 2012, the panel found probable links between PFOA and kidney cancer, testicular cancer, ulcerative colitis, thyroid disease, pregnancy-induced hypertension (including preeclampsia), and hypercholesterolemia.

183. Human health effects associated with PFOS exposure include immune system effects, changes in liver enzymes and thyroid hormones, low birth weight, high uric acid, and high cholesterol. In laboratory testing on animals, PFOA and PFOS have caused the growth of tumors, changed hormone levels, and affected the function of the liver, thyroid, pancreas, and immune system.

184. The injuries caused by PFAS can arise months or years after exposure.

185. Even after the C8 Science Panel publicly announced that human exposure to 50 parts per trillion, or more, of PFOA in drinking water for one year or longer had “probable links” with certain human diseases, including kidney cancer, testicular cancer, ulcerative colitis, thyroid disease, preeclampsia, and medically-diagnosed high cholesterol, Defendants repeatedly assured and represented to governmental entities, their customers, and the public (and continue to do so) that the presence of PFOA in human blood at the levels found within the United States presents no risk of harm and is of no legal, toxicological, or medical significance of any kind.

186. Furthermore, Defendants have represented to and assured such governmental entities, their customers, and the public (and continue to do so) that the work of the independent

C8 Science Panel was inadequate to satisfy the standards of Defendants to prove such adverse effects upon and/or any risk to humans with respect to PFOA in human blood.

187. At all relevant times, Defendants, through their acts and/or omissions, controlled, minimized, trivialized, manipulated, and/or otherwise influenced the information that was published in peer-review journals, released by any governmental entity, and/or otherwise made available to the public relating to PFAS in human blood and any alleged adverse impacts and/or risks associated therewith, effectively preventing the public from discovering the existence and extent of any injuries/harm as alleged herein.

188. On May 2, 2012, the EPA published its Third Unregulated Contaminant Monitoring Rule (“UCMR3”), requiring public water systems nationwide to monitor for thirty contaminants of concern between 2013 and 2015, including PFOS and PFOA.<sup>24</sup>

189. In the May 2015 “Madrid Statement on Poly- and Perfluoroalkyl Substances (PFAS’s),” scientists and other professionals from a variety of disciplines, concerned about the production and release into the environment of PFOA, called for greater regulation, restrictions, limits on the manufacture and handling of any PFOA containing product, and to develop safe non-fluorinated alternatives to these products to avoid long-term harm to human health and the environment.<sup>25</sup>

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<sup>24</sup> *Revisions to the Unregulated Contaminant Monitoring Regulation (UCMR 3) for Public Water Systems*, 77 Fed. Reg. 26072 (May 2, 2012).

<sup>25</sup> Blum A, Balan SA, Scheringer M, Trier X, Goldenman G, Cousins IT, Diamond M, Fletcher T, Higgins C, Lindeman AE, Peaslee G, de Voogt P, Wang Z, Weber R. 2015. The Madrid statement on poly- and perfluoroalkyl substances (PFASs). *Environ Health Perspect* 123:A107–A111; <http://dx.doi.org/10.1289/ehp.1509934>.

190. On May 25, 2016, the EPA released a lifetime health advisory level (HAL) for drinking water and health effects support documents for PFOS and PFOA.<sup>26</sup> *See* Fed. Register, Vol. 81, No. 101, May 25, 2016. The EPA developed the HAL to assist governmental officials in protecting public health when PFOS and PFOA are present in drinking water. The EPA HAL identified the concentration of PFOS and PFOA in drinking water at or below which adverse health effects are not anticipated to occur over a lifetime of exposure at 0.07 ppb or 70 ppt. The HAL was based on peer-reviewed studies of the effects of PFOS and PFOA on laboratory animals (rats and mice) and was also informed by epidemiological studies of human populations exposed to PFOS. These studies indicated that exposure to PFOS and PFOA over the HAL could result in adverse health effects, including:

- a. Developmental effects to fetuses during pregnancy or to breastfed infants (e.g., low birth weight, accelerated puberty, skeletal variations);
- b. Cancer (testicular and kidney);
- c. Liver effects (tissue damage);
- d. Immune effects (e.g., antibody production and immunity);
- e. Thyroid disease and other effects (e.g., cholesterol changes).

191. In 2016, the National Toxicology Program of the United States Department of Health and Human Services (“NTP”) and the International Agency for Research on Cancer (“IARC”) both released extensive analyses of the expanding body of research regarding the

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<sup>26</sup> *See* Fed. Register, Vol. 81, No. 101, May 25, 2016, Lifetime Health Advisories and Health Effects Support Documents for Perfluorooctanoic Acid and Perfluorooctane Sulfonate.

adverse effects of PFCs. The NTP concluded that both PFOA and PFOS are “presumed to be an immune hazard to humans” based on a “consistent pattern of findings” of adverse immune effects in human (epidemiology) studies and “high confidence” that PFOA and PFOS exposure was associated with suppression of immune responses in animal (toxicology) studies.<sup>27</sup>

192. IARC similarly concluded that there is “evidence” of “the carcinogenicity of . . . PFOA” in humans and in experimental animals, meaning that “[a] positive association has been observed between exposure to the agent and cancer for which a causal interpretation is . . . credible.”<sup>28</sup>

193. California has listed PFOA and PFOS to its Proposition 65 list as a chemical known to cause reproductive toxicity under the Safe Drinking Water and Toxic Enforcement Act of 1986.<sup>29</sup>

194. The United States Senate and House of Representatives passed the National Defense Authorization Act in November 2017, which included \$42 Million to remediate PFC contamination from military bases, as well as devoting \$7 Million toward the Investing in Testing

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<sup>27</sup> See U.S. Dep’t of Health and Human Services, Nat’l Toxicology Program, *NTP Monograph: Immunotoxicity Associated with Exposure to Perfluorooctanoic Acid or Perfluorooctane Sulfonate* (Sept. 2016), at 1, 17, 19, available at [https://ntp.niehs.nih.gov/ntp/ohat/pfoa\\_pfos/pfoa\\_pfosmonograph\\_508.pdf](https://ntp.niehs.nih.gov/ntp/ohat/pfoa_pfos/pfoa_pfosmonograph_508.pdf)

<sup>28</sup> See Int’l Agency for Research on Cancer, IARC Monographs: *Some Chemicals Used as Solvents and in Polymer Manufacture* (Dec. 2016), at 27, 97, available at <http://monographs.iarc.fr/ENG/Monographs/vol110/mono110.pdf>.

<sup>29</sup> California Office of Environmental Health Hazard Assessment, *Chemicals Listed Effective Nov. 10, 2017 as Known to the State of California to Cause Reproductive Toxicity: Perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonate (PFOS)*, Nov. 9, 2017, available at <https://oehha.ca.gov/proposition-65/crn/chemicals-listed-effective-november-10-2017-known-state-california-cause>.

Act, which authorizes the Center for Disease Control and Prevention (“CDC”) to conduct a study into the long-term health effects of PFOA and PFOS exposure.<sup>30</sup> The legislation also required that the Department of Defense submit a report on the status of developing a new military specification for AFFF that did not contain PFOS or PFOA.<sup>31</sup>

195. In June 2018, the Agency for Toxic Substances and Disease Registry (“ATSDR”) and EPA released a draft toxicological profile for PFOS and PFOA and recommended the drinking water advisory levels be lowered to 11 ppt for PFOA and 7 ppt for PFOS.<sup>32</sup>

196. On February 20, 2020, the EPA announced a proposed decision to regulate PFOA and PFOS under the Safe Drinking Water Act, which the agency characterized as a “key milestone” in its efforts to “help communities address per- and polyfluoroalkyl substances (PFAS) nationwide.”<sup>33</sup> Following a public comment period on its proposed decision, the EPA will decide whether to move forward with the process of establishing a national primary drinking water regulation for PFOA and PFOS.

197. On July 23, 2020, the Governor of New Hampshire signed into law a bill that set maximum contaminant levels (MCLs) for four types of PFAS in drinking water. The New

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<sup>30</sup> National Defense Authorization Act for Fiscal Year 2018, H.R. 2810, 115th Congress (2017), available at <https://www.congress.gov/115/plaws/publ91/PLAW-115publ91.pdf>.

<sup>31</sup> *Id.*; see also U.S. Department of Defense, *Alternatives to Aqueous Film Forming Foam Report to Congress*, June 2018, available at <https://www.denix.osd.mil/derp/home/documents/alternatives-to-aqueous-film-forming-foam-report-to-congress/>.

<sup>32</sup> ATSDR, *Toxicological Profile for Perfluoroalkyls: Draft for Public Comment* (June 2018), available at <https://www.atsdr.cdc.gov/toxprofiles/tp200.pdf>.

<sup>33</sup> Press Release, *EPA Announces Proposed Decision to Regulate PFOA and PFOS in Drinking Water*, Feb. 20, 2020, available at <https://www.epa.gov/newsreleases/epa-announces-proposed-decision-regulate-pfoa-and-pfos-drinking-water>.



Hampshire Bill (H.B. 1264 (2020)), established the following limits: PFOA: 12 ppt, PFOS: 15, PFNA: 11, and PFHxS: 18. The MCLs took effect on June 30, 2020.

198. On June 15, 2022, the EPA released new drinking water health advisory levels (HALs) for four PFAS, including new interim HALs for PFOS and PFOA that departed significantly from the 2016 EPA HAL they replaced.<sup>34</sup> See Fed. Register, Vol. 87, No. 36848, June 21, 2022. Specifically, EPA issued HALs of 0.004 ppt for PFOA and 0.02 ppt for PFOS,<sup>35</sup> which collectively accounted for only a small fraction of the combined 70 ppt HAL that preceded them. Importantly, EPA set these interim HALs at levels below which PFOS and PFOA can be measured using current analytic methods, meaning that the mere detection of PFOS or PFOA in a water provider's system would be sufficient on its own to exceed the new levels.

199. As support for its decision, EPA explained that the science had evolved since 2016 and that the new interim HALs for PFOS and PFOA were “based on human studies” that “found associations between PFOA and/or PFOS exposure and effects on the immune system, the cardiovascular system, human development (e.g., decreased birth weight), and cancer.”<sup>36</sup> Specifically, EPA had performed updated health effects analyses for PFOS and PFOA to provide support for the drinking water regulations the agency planned to adopt for the two chemicals under the SDWA. Based on these analyses, EPA concluded that “the levels at which negative health effects could occur are much lower than previously understood when EPA issued the 2016 health

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<sup>34</sup> See Fed. Register, Vol. 87, No. 36848, June 21, 2022, Lifetime Drinking Water Health Advisories for Four Perfluoroalkyl Substances.

<sup>35</sup> *Id.*

<sup>36</sup> EPA, *Drinking Water Health Advisories for PFAS Fact Sheet for Communities* at 1-2 (June 2022), available at <https://www.epa.gov/system/files/documents/2022-06/drinking-water-ha-pfas-factsheet-communities.pdf>.

advisories for PFOA and PFOS – including near zero for certain health effects.”<sup>37</sup> For this reason, the agency determined there was a “pressing need to provide updated information on the current best available science to public health officials prior to finalization of the health effects assessment.”<sup>38</sup>

200. Because the referenced health analyses are still undergoing final review by EPA’s Science Advisory Board, the agency has stated that the new interim HALs for PFOS and PFOA are subject to change. EPA has indicated, however, that it does not anticipate any changes resulting in revised HALs for PFOS and PFOA that are greater than the 4 ppt minimum reporting level<sup>39</sup> that applies to Public Water Systems.

201. Because the referenced health analyses are still undergoing final review by EPA’s Science Advisory Board, the agency has stated that the new interim HALs for PFOS and PFOA are subject to change. EPA has indicated, however, that it does not anticipate any changes resulting

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<sup>37</sup> EPA, *Drinking Water Health Advisories for PFAS Fact Sheet for Public Water Systems* at 2 (June 2022), available at <https://www.epa.gov/system/files/documents/2022-06/drinking-water-ha-pfas-factsheet-water-system.pdf>.

<sup>38</sup> EPA Office of Water, EPA Doc. No. 822-R-22-003, *INTERIM Drinking Water Health Advisory: Perfluorooctanoic Acid (PFOA) CASRN 335-67-1* at 18 (June 2022), available at <https://www.epa.gov/system/files/documents/2022-06/interim-pfoa-2022.pdf>; EPA Office of Water, EPA Doc. No. 822-R-22-004, *INTERIM Drinking Water Health Advisory: CASRN 1763-23-1* at 18 (June 2022), available at <https://www.epa.gov/system/files/documents/2022-06/interim-pfos-2022.pdf>.

<sup>39</sup> As EPA’s website explains, the Minimum Reporting Level (“MRL”) for Unregulated Contaminant Monitoring Rule (UCMR) 5 is the minimum quantitation level that, with 95 percent confidence, can be achieved by capable analysts at 75 percent or more of the laboratories using a specified analytical method. The MRLs in EPA’s chart are based on the UCMR 5 requirement to use EPA Method 533.

in revised HALs for PFOS and PFOA that are greater than the 4 ppt minimum reporting level<sup>40</sup> that applies to Public Water Systems.<sup>41</sup>

**E. The Use of AFFF at Pease AFB**

202. The City of Portsmouth developed a municipal airport in the 1930s. In War World II the airport was used by the US Navy for military activities.

203. Pease AFB was established in 1951 by the USAF as a Strategic Air Command (“SAC”) facility.

204. Additional land was purchased for the expansion of the base, and it was officially opened in 1956 as Portsmouth Air Force Base, until 1957, when the installation was renamed to Pease AFB.

205. The Fire Training Area 1 (“FTA-1”) was used from 1956 to 1961 and the Fire Training Area 2 (“FTA-2”) was used from 1961 to 1988.

206. In 1970, the USAF began using AFFF at Pease AFB for extinguishing and preventing petroleum fires, during fire-fighting training activities and in fire suppression systems at several buildings.

207. Pease AFB closed on March 31, 1991, as part of the Secretary of Defense’s Commission on Base Realignment and Closure.

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<sup>40</sup> As EPA’s website explains, the Minimum Reporting Level (“MRL”) for Unregulated Contaminant Monitoring Rule (UCMR) 5 is the minimum quantitation level that, with 95 percent confidence, can be achieved by capable analysts at 75 percent or more of the laboratories using a specified analytical method. The MRLs in EPA’s chart are based on the UCMR 5 requirement to use EPA Method 533.

<sup>41</sup> EPA, *Drinking Water Health Advisories for PFAS Fact Sheet for Public Water Systems* at 2 (June 2022), available at <https://www.epa.gov/system/files/documents/2022-06/drinking-water-ha-pfas-factsheet-water-system.pdf>.

208. It was subdivided among three entities: the New Hampshire Air National Guard, the United States Department of the Interior and the Pease Development Authority (“PDA”).

209. In 1992, 1,702 acres of the property were transferred to the PDA for the development of the public airport, 1,100 acres were transferred to the US Fish and Wildlife Service for the creation of the Great Bay National Wildlife Refuge, and 1,300 acres were transferred to the PDA for commercial development.<sup>42</sup>

210. The USAF retained 229 acres of the former Pease AFB for the New Hampshire Air National Guard.

211. In 1993, the industrial park began to operate. The City of Portsmouth entered into a long-term lease and operation agreement with the PDA to operate and maintain the public water system serving the Pease International Tradeport (“Tradeport”).

212. The Tradeport, contains over 250 companies employing more than 9,525 people.

213. In 1993, the Portsmouth Fire Department reopened the former Pease AFB municipal firefighting station.

214. The former crash fire station was located on the installation’s flight line, south of the control tower and was in service from 1954 to 2006. AFFF was stored at the station from 1974 until its closure.<sup>43</sup>

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<sup>42</sup> Tetra Tech, Inc, *Final Work Plan: Accelerated Site Completion Activities at Site SS016* (February 2015), available at <http://afcec.publicadmin-record.us.af.mil/Search.aspx>.

<sup>43</sup> Amec Foster Wheeler Environment & Infrastructure, Inc. *Final Perfluorinated Compounds Preliminary Assessment Former Pease Air Force Base Portsmouth, New Hampshire* (December 2015) available at <http://afcec.publicadmin-record.us.af.mil/Search.aspx>.

215. The New Hampshire Air National Guard Fire Department (“NHANGFD”) still operates a crash fire station on the flight line north of the control tower, that stores AFFF in two mobile trailers.

**F. Contamination of the Pease Aquifer**

216. Three major supply wells provided drinking water to Pease AFB: the Haven, Smith and Harrison wells.

217. The Heaven well is the largest producer of the three wells and the original public drinking water source for the City of Portsmouth that dates back to 1875.<sup>44</sup>

218. The Haven well supplied water for 8,000 people until it was taken out of service in May 2014.

219. In June 2013, two rounds of sampling were conducted at 22 locations, including 20 monitoring wells, the groundwater treatment system effluent and at the water spring.

220. PFOA was detected in all samples, results ranged from 0.0055 to 120 µg/L and PFOS from 0.032 to 95 µg/L.<sup>45</sup>

221. Samples from September 2013, showed PFOA results that ranged from 0.0021 to 72 µg/L and PFOS from 0.015 to 42 µg/L.

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<sup>44</sup> Weston & Sampson, City of Portsmouth Pease Treatment Cost Alternative Report, (June 2017), [http://files.cityofportsmouth.com/publicworks/Pease%20Well%20Treatment%20Cost%20Alternative%20Report%20-%20June%202017%20\(Final\).pdf](http://files.cityofportsmouth.com/publicworks/Pease%20Well%20Treatment%20Cost%20Alternative%20Report%20-%20June%202017%20(Final).pdf).

<sup>45</sup> CB & I Federal Services LLC., *Final Perfluorinated Compound Investigation Work Plan Site 8, AT008 Fire Department Training Area 2 Former Pease Air Force Base, Portsmouth, New Hampshire* (April 2015), available at <http://afcec.publicadmin-record.us.af.mil/Search.aspx>.

222. In January 2014, the USAF issued a report that showed concentrations of PFAS in groundwater samples taken from monitoring wells at FTA-2. The highest concentration of PFOS was 95 µg/L and PFOA was 120 µg/L.

223. On April 16, 2014, the USAF sampled the Haven, Harrison, and Smith wells. The Haven well detected PFOS at 2.5µg/L. The Harrison and Smith wells also had PFAS.

224. The Harrison, Smith, Collins and Portsmouth wells are collectively known as the Pease Aquifer southern well field.

225. Samples taken from the Southern Well Field showed PFAS contamination. Three of these wells provided drinking water to the former Pease AFB and supplemented the City of Portsmouth's water supply.

226. On May 12, 2014, USAF notified the New Hampshire Department of Environmental Services ("NHDES") that the water samples collected on April 2014, detected PFOS at 2,500 ppt in the Haven well, PFOA at 350 ppt and PFHxS at 830 ppt.<sup>46</sup>

227. NHDES notified the City of Portsmouth on May 12, 2014. City officials closed the Haven well, and determined that it would remain offline until a new water treatment system funded by USAF was installed.<sup>47</sup>

228. The Haven well's closure resulted in 46% decrease in the Tradeport's water supply and 10% decrease in the City of Portsmouth's water supply.

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<sup>46</sup> State of New Hampshire Department of Health and Human Services Division of Public Health Services. June 16, 2016. Pease PFC Blood Testing Program: April 2015-October 2015.

<sup>47</sup> Scott Johnston. July 24, 2017 Air Force continue attack on PFOS/PFOA issues at Pease available at <https://www.afcec.af.mil/News/Article-Display/Article/1255851/air-force-continues-attack-on-pfospfoa-issues-at-pease/>

229. After May 2014, the Smith and Harrison wells supplied 56% of the water and the City of Portsmouth provided the remaining 44%.

230. Since May 12, 2014, 50% of water demand is supplied by the City of Portsmouth.<sup>48</sup>

231. The City of Portsmouth continues to use the Smith, Collins and Harrison wells for water at the Tradeport.<sup>49</sup>

232. Presently, the Portsmouth Regional Water System supplies the former Pease AFB, Greenland, New Castle, Newington, Portsmouth and portions of Rye and Madbury.<sup>50</sup>

233. In September 2014, USAF issued the Final Five-Year Review Report (2009-2014) former Pease AFB.<sup>51</sup>

234. On July 9, 2015, USEPA issued an administrative order for responsive action requiring USAF to undertake Emergency Response Actions and Feasibility Studies, Design and Remedial Actions, to abate the threat to public health presented by the contamination.

235. On August 3, 2015, USEPA issued a final order that modified the administrative order for responsive action.

236. In December 2015, USAF submitted the Final Perfluorinated Compounds Preliminary Assessment that identified 21 AFFF areas at the former Pease AFB.

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<sup>48</sup> <http://files.cityofportsmouth.com/publicworks/PeaseTradePortWaterSystemOverviewandHistory.pdf>

<sup>49</sup> Amec Foster Wheeler Environment & infrastructure, Inc, Final Basewide Site Investigation Report: Perfluorinated Compounds Release Response Former Pease Air Force Base, June 2017.

<sup>50</sup> City of Portsmouth NH Department of Public Works. Water Operations, <https://www.cityofportsmouth.com/publicworks/water>.

<sup>51</sup> CB & I Federal Services LLC., *Final Five-Year Review Report (2009-2014), Former Pease AFB* (September 2014), available at <http://afcec.publicadmin-record.us.af.mil/Search.aspx>.

237. USAF also prepared the Basewide Site Investigation Report: Perfluorinated Compounds Release Response. The objective of the program was to determine the presence/absence of PFOS and PFOA at the potential AFFF areas. To facilitate the design of an interim groundwater treatment plant for the Haven well.

238. In September 2016, the City of Portsmouth finished installing two granular activated carbon (“GAC”) vessels to remove PFAS from the Smith and Harrison wells.

239. The City of Portsmouth and USAF entered into an agreement to treat PFOS and PFOA at the Smith, Harrison and Haven wells. The agreement provides the city up to \$14.3 million of reimbursement costs for the construction and administration of the final GAC treatment system.<sup>52</sup>

240. The Haven well was reactivated on August 3, 2021.

**G. The Pease PFC Blood Testing Program**

241. In 2014, the USAF conducted a survey to identify residential wells within the 1-mile radius of the former Pease AFB.

242. In April 2015, the Governor of New Hampshire made PFC blood testing available to anyone on Pease AFB that drank the contaminated water prior to May 2014.

243. In 2015, NHDHHS began a blood testing program for people who had lived, worked and/or attended childcare at the Tradeport.

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<sup>52</sup> City of Portsmouth. (2019, February 21). Pease Tradeport Water Supply Update.  
<http://files.cityofportsmouth.com/files/ww/PeaseWaterSupplyandPFCDemonstrationProjectUpdate19Feb21.pdf>



244. Between April and October 2015, 1,578 people submitted blood samples for analysis. Results indicated that the exposed population had higher serum levels of PFOS, PFOA and PFHxS compared to the US population tested in 2011-2012, as part of the CDC's National Health and Nutrition Examination Survey.<sup>53</sup>

245. PFOS, PFOA and PFHxS were detected in more than 94% of participants' serum samples.<sup>54</sup>

246. In the summer of 2016, NHDHHS reopened PFAS blood testing for those exposed at the Tradeport.

247. In November 2017, ATSDR issued its feasibility assessment for epidemiological studies. It concluded that it was possible to evaluate some health-related endpoints if a sufficient number of children and adults from the Pease AFB population participated.

248. In May 2018, ATSDR announced that it would do a health study on adults and children exposed to PFAS at former Pease AFB. Becoming the first site to participate in a multi-state PFAS study with ATSDR.<sup>55</sup>

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<sup>53</sup> U.S. Department of Health and Human Services, Feasibility Assessment for Epidemiological Studies at Pease International Tradeport, Portsmouth, New Hampshire, [https://www.atsdr.cdc.gov/sites/pease/documents/Pease\\_Feasibility\\_Assessment\\_November-2017\\_508.pdf](https://www.atsdr.cdc.gov/sites/pease/documents/Pease_Feasibility_Assessment_November-2017_508.pdf)

<sup>54</sup> *NH Department of Health and Human Services, Division of Public Health Services*. PFC Blood Testing Report, June 16, 2016. Available at <https://www.dhhs.nh.gov/media/pr/2016/pease-final-06162016.htm>

<sup>55</sup> Liebeskind, Ken. "PFAS study to be funded by \$10M grant." *The Telegraph*, August 12, 2018.

**H. AFFF Containing PFOS and PFOA Is Fungible and Commingled in the Groundwater**

249. AFFF containing PFOS and/or PFOA, once it has been released to the environment, lacks characteristics that would enable identification of the company that manufactured that particular batch of AFFF or chemical feedstock.

250. A subsurface plume, even if it comes from a single location, such as a retention pond or fire training area, originates from mixed batches of AFFF and chemical feedstock coming from different manufacturers.

251. Because precise identification of the specific manufacturer of any given AFFF/Component Product that was a source of the PFAS found at Pease AFB is nearly impossible, given certain exceptions, Plaintiffs must pursue all Defendants, jointly and severally.

252. Defendants are also jointly and severally liable because they conspired to conceal the true toxic nature of PFOS and PFOA, to profit from the use of AFFF/Component Products containing PFOS and PFOA, at Plaintiffs' expense, and to attempt to avoid liability.

**MARKET SHARE LIABILITY, ALTERNATIVE LIABILITY,  
CONCERT OF ACTION, AND ENTERPRISE LIABILITY**

253. Defendants in this action are manufacturers that control a substantial share of the market for AFFF/Component Products containing PFOS, PFOA, and/or their chemical precursors in the United States and are jointly responsible for the contamination of the groundwater at Pease AFB. Market share liability attaches to all Defendants and the liability of each should be assigned according to its percentage of the market for AFFF/Component Products at issue in this Complaint.

254. Because PFAS is fungible, it is impossible to identify the exact Defendant who manufactured any given AFFF/Component Product containing PFOS, PFOA, and/or their chemical precursors found free in the air, soil or groundwater, and each of these Defendants participated in a territory-wide and U.S. national market for AFFF/Component Products during the relevant time.

255. Concert of action liability attaches to all Defendants, each of which participated in a common plan to commit the torts alleged herein and each of which acted tortuously in pursuance of the common plan to knowingly manufacture and sell inherently dangerous AFFF/Component Products containing PFOS, PFOA, and/or their chemical precursors.

256. Enterprise liability attaches to all the named Defendants for casting defective products into the stream of commerce.

### **CAUSES OF ACTION**

#### **COUNT I:** **DEFECTIVE DESIGN**

257. Plaintiffs adopt, reallege, and incorporate the allegations in paragraphs 1 through 256 above, and further allege the following:

258. As manufacturers of AFFF/Component Products containing PFOS, PFOA, and/or their chemical precursors, Defendants owed a duty to all persons whom its products might foreseeably harm, including Plaintiffs, and not to market any product which is unreasonably dangerous in design for its reasonably anticipated use.

259. Defendants' AFFF/Component Products were unreasonably dangerous for its reasonably anticipated uses for the following reasons:

- a. PFAS causes extensive groundwater contamination, even when used in its foreseeable and intended manner;
- b. Even at extremely low levels, PFAS render drinking water unfit for consumption;
- c. PFAS poses significant threats to public health; and
- d. PFAS create real and potential environmental damage.

260. Defendants knew of these risks and failed to use reasonable care in the design of their AFFF/Component Products.

261. AFFF containing PFOS, PFOA, and/or their chemical precursors poses a greater danger to the environment and to human health than would be expected by ordinary persons such as Plaintiffs and the general public.

262. At all times, Defendants were capable of making AFFF/Component Products that did not contain PFOS, PFOA, and/or their chemical precursors. Thus, reasonable alternative designs existed which were capable of preventing Plaintiffs' injuries.

263. The risks posed by AFFF containing PFOS, PFOA, and/or their chemical precursors far outweigh the products' utility as a flame-control product.

264. The likelihood that Defendants' AFFF/Component Products would be spilled, discharged, disposed of, or released into the environment and contaminate Pease AFB and the surrounding areas far outweighed any burden on Defendants to adopt an alternative design, and outweighed the adverse effect, if any, of such alternative design on the utility of the product.

265. As a direct and proximate result of Defendants' unreasonably dangerous design, manufacture, and sale of AFFF/Component Products containing PFOS, PFOA, and/or their

chemical precursors, Plaintiffs have been injured in that their exposure to PFOS, PFOA, and potentially other toxic substances have caused them to develop illnesses associated with this exposure as more fully described herein and/or significantly increased their risk of developing those illnesses.

266. Defendants knew that it was substantially certain that their acts and omissions described above would result in the contamination of the wells that provided drinking water to residents and/or employees at former Pease AFB.

267. Defendants committed each of the above-described acts and omissions knowingly, willfully, and/or with fraud, oppression, or malice, and with conscious and/or reckless disregard for Plaintiffs' health and safety, and/or property rights.

**COUNT II:**  
**FAILURE TO WARN**

268. Plaintiffs adopt, reallege, and incorporate the allegations in paragraphs 1 through 267 above, and further allege the following:

269. As manufacturers of AFFF/Component Products containing PFOS, PFOA, and/or their chemical precursors, Defendants had a duty to provide adequate warnings of the risks of these products to all persons whom its product might foreseeably harm, including Plaintiffs and the public.

270. Defendants' AFFF/Component Products were unreasonably dangerous for its reasonably anticipated uses for the following reasons:

- a. PFAS causes extensive groundwater contamination, even when used in its foreseeable and intended manner;

- b. Even at extremely low levels, PFAS render drinking water unfit for consumption;
- c. PFAS poses significant threats to public health; and
- d. PFAS create real and potential environmental damage.

271. Defendants knew of the health and environmental risks associated with their AFFF/Component Products, and failed to provide a warning that would lead an ordinary reasonable user or handler of a product to contemplate the dangers associated with their products or an instruction that would have avoided Plaintiffs' injuries.

272. Despite Defendants' knowledge of the environmental and human health hazards associated with the use and/or disposal of their AFFF/Component Products in the vicinity of drinking water supplies, including PFAS contamination of public drinking supplies and private wells, Defendants failed to issue any warnings, instructions, recalls, or advice regarding their AFFF/Component Products to Plaintiffs, governmental agencies or the public.

273. As a direct and proximate result of Defendants' failure to warn, Plaintiffs have been injured in that their exposure to PFOS, PFOA, and potentially other toxic substances have caused them to develop illnesses associated with this exposure as more fully described herein and/or significantly increased their risk of developing those illnesses.

274. Defendants knew that it was substantially certain that their acts and omissions described above would result in the contamination of the wells that provided drinking water to residents and/or employees at former Pease AFB.

275. Defendants committed each of the above-described acts and omissions knowingly, willfully, and/or with fraud, oppression, or malice, and with conscious and/or reckless disregard for Plaintiffs' health and safety, and/or property rights.

**COUNT III:**  
**NEGLIGENCE**

276. Plaintiffs adopt, reallege, and incorporate the allegations in paragraphs 1 through 275 above, and further allege the following:

277. As manufacturers of AFFF/Component Products containing PFOS, PFOA, and/or their chemical precursors, Defendants owed a duty to Plaintiff and to all persons whom its products might foreseeably harm and to exercise due care in the formulation, manufacture, sale, labeling, warning, and use of PFAS-containing AFFF.

278. Defendants owed a duty to Plaintiff to act reasonably and not place inherently dangerous AFFF/Component Products into the marketplace when its release into the air, soil, and water was imminent and certain.

279. Defendants knew or should have known that PFAS were leaching from AFFF used for fire protection, training, and response activities.

280. Defendants knew or should have known that PFAS are highly soluble in water, highly mobile, extremely persistent in the environment, and high likely to contaminate water supplies if released into the environment.

281. Defendants knew or should have known that the manner in which they were designing, manufacturing, marketing, distributing, and selling their AFFF/Component Products

would result in the contamination of the wells that provided drinking water to residents and/or employees at former Pease AFB.

282. Despite the fact that Defendants knew or should have known that PFAS are toxic, can contaminate water resources and are carcinogenic, Defendants negligently:

- a. designed, manufactured, formulated, handled, labeled, instructed, controlled, marketed, promoted, and/or sold AFFF/Component Products containing PFOS, PFOA, and/or their chemical precursors;
- b. issued deficient instructions on how their AFFF/Component Products should be used and disposed of, thereby permitting PFAS to contaminate the groundwater in and around Pease AFB;
- c. failed to recall and/or warn the users of their AFFF/Component Products of the dangers of groundwater contamination as a result of standard use and disposal of their products;
- d. failed and refused to issue the appropriate warning and/or recalls to the users of their AFFF/Component Products; and
- e. failing to take reasonable, adequate, and sufficient steps or actions to eliminate, correct, or remedy any contamination after it occurred.

283. The magnitude of the burden on the Defendants to guard against this foreseeable harm to Plaintiff was minimal, as the practical consequences of placing this burden on the Defendants amounted to a burden to provide adequate instructions, proper labeling, and sufficient warnings about their AFFF/Component Products.



284. As manufacturers, Defendants were in the best position to provide adequate instructions, proper labeling, and sufficient warnings about their AFFF/Component Products, and to take steps to eliminate, correct, or remedy any contamination they caused.

285. As a direct and proximate result of Defendants' negligence, Plaintiffs have been injured in that their exposure to PFOS, PFOA, and potentially other toxic substances have caused them to develop illnesses associated with this exposure as more fully described herein and/or significantly increased their risk of developing those illnesses.

286. Defendants knew that it was substantially certain that their acts and omissions described above would result in the contamination of the wells that provided drinking water to residents and/or employees at former Pease AFB. Defendants committed each of the above-described acts and omissions knowingly, willfully, and/or with fraud, oppression, or malice, and with conscious and/or reckless disregard for Plaintiffs' health and safety, and/or property rights.

**CLAIM FOR ENHANCED COMPENSATORY DAMAGES**

287. Plaintiffs adopt, reallege, and incorporate each and every allegation in the paragraphs 1 through 286 above, and following:

288. At all times relevant to the present cause of action, Defendants manufactured, marketed, and sold the AFFF that was used at Pease AFB that resulted in the contamination of the water supply relied upon by Plaintiffs at all relevant times.

289. At the time the above-described, affirmative, voluntary, and intentional acts were performed by Defendants, Defendants had good reason to know or expect that large quantities of

PFOA and PFOS would and/or could be introduced into the environment, causing contamination of surface and groundwater, as well as public drinking water wells.

290. The above-described affirmative, voluntary, and intentional acts were performed with the reckless disregard of the potential for PFOA and PFOS to be disbursed through the water consumed by Plaintiffs.

291. Defendants' negligent, reckless, wanton, willful, and/or oppressive actions and/or wanton, willful, oppressive and/or intentional failures to act caused an unknown quantity of PFOA and PFOS to be released into the drinking water supplied to residents and employers at the former Pease AFB.

292. Defendants' wanton, willful, and/or oppressive conduct includes but is not limited to Defendants' failure to take all reasonable measures to ensure PFOA and PFOS, which they knew to be carcinogenic, was not ingested by Plaintiffs.

293. Defendants have caused great harm to the environment and wells that supplied drinking water to Plaintiffs and demonstrated an outrageous conscious disregard for their safety with implied malice, warranting the imposition of enhanced compensatory damages.

294. Accordingly, Plaintiffs seek damages from Defendants, in an amount to be determined at trial, directly resulting from their injuries to their persons, in a sufficient amount to compensate them for the injuries and losses sustained and to restore Plaintiffs to their original position.

**PRAYER FOR RELIEF**

WHEREFORE, Plaintiffs, demand judgment against Defendants, and each of them, jointly and severally, and request the following relief from the Court:

- a. A declaration that Defendants acted with negligence, gross negligence, and/or willful, wanton, and careless disregard for the health, safety of Plaintiffs;
- b. an award to Plaintiffs of general, compensatory, exemplary, consequential, nominal, and punitive damages;
- c. an order for an award of attorney fees and costs, as provided by law;
- d. pre-judgment and post-judgment interest as provided by law;
- e. equitable or injunctive relief;
- f. an award of enhanced compensatory damages in an amount sufficient to deter Defendants' similar wrongful conduct in the future;
- g. an award of consequential damages;
- h. an order for an award of attorney fees and costs, as provided by law;
- i. an award of pre-judgment and post-judgment interest as provided by law; and
- j. an order for all such other relief the Court deems just and proper.

**DEMAND FOR JURY TRIAL**

Plaintiffs demand a trial by jury of all issues so triable as a matter of right.

Dated: New York, New York

Respectfully submitted,  
57

July 1, 2022

**NAPOLI SHKOLNIK**

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To the above-named Defendant:

You are hereby summoned to answer the Complaint in this action, and to serve a copy of your Answer, or, if the Complaint is not served with this Summons, to serve a Notice of Appearance on the Plaintiffs' attorneys within twenty (20) days after the service of this Summons, exclusive of the day of service, where service is made by delivery upon you personally within the state, or, within thirty (30) days after completion of service where service is made in any other manner. In case of your failure to appear or answer, judgment will be taken against you by default for the relief demanded in the Complaint.

Dated: New York, New York  
July 1, 2022

Napoli Shkolnik, PLLC  
*Attorneys for Plaintiff*

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Patrick Lanciotti, Esq.  
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To:

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251 Little Falls Drive  
Wilmington, New Castle, DE 19808

AGC CHEMICALS AMERICAS INC.  
c/o The Corporation Trust Company  
Corporation Trust Center  
1209 Orange Street  
Wilmington, DE 19801

AMEREX CORPORATION

c/o James M. Proctor II  
2900 Highway 280  
Suite 300  
Birmingham, AL 35223

ARCHROMA U.S. INC.

c/o The Corporation Trust Company  
Corporation Trust Center  
1209 Orange Street  
Wilmington, DE 19801

ARKEMA INC.

900 First Avenue  
King of Prussia, PA 19406

BASF CORPORATION

c/o The Corporation Trust Company  
Corporation Trust Center  
1209 Orange Street  
Wilmington, DE 19801

BUCKEYE FIRE EQUIPMENT COMPANY

c/o A Haon Corporate Agent, Inc.  
29225 Chagrin Blvd, Suite 350  
Pepper Pike, OH 44122

CARRIER GLOBAL CORPORATION

c/o The Corporation Trust Company  
Corporation Trust Center  
1209 Orange Street  
Wilmington, DE 19801

CHEMDESIGN PRODUCTS INC.

c/o Corporation Service Company  
251 Little Falls Drive  
Wilmington, New Castle, DE, 19808

CHEMGUARD INC.  
c/o The Prentice-Hall Corporation System, Inc.  
251 Little Falls Drive  
Wilmington, New Castle, DE, 19808

CHEMICALS, INC.  
c/o Ashok K. Moza  
12321 Hatcherville  
Baytown, TX 77520

CLARIANT CORPORATION  
c/o Corporation Service Company  
8040 Excelsior Drive, Suite 400  
Madison, WI 53717

CORTEVA, INC.  
c/o The Corporation Trust Company  
Corporation Trust Center  
1209 Orange Street  
Wilmington, DE 19801

DEEPWATER CHEMICALS, INC.  
c/o The Corporation Trust Company  
Corporation Trust Center  
1209 Orange Street  
Wilmington, DE 19801

DUPONT DE NEMOURS INC.  
c/o The Corporation Trust Company  
Corporation Trust Center  
1209 Orange Street  
Wilmington, DE 19801

DYNAX CORPORATION  
c/o Corporate Systems LLC  
3500 S. Dupont Highway  
Dover, DE 19901

E. I. DUPONT DE NEMOURS AND COMPANY  
c/o The Corporation Trust Company  
Corporation Trust Center  
1209 Orange Street

Wilmington, DE 19801

KIDDE-FENWAL, INC.  
c/o The Corporation Trust Company  
Corporation Trust Center  
1209 Orange Street  
Wilmington, DE 19801

NATION FORD CHEMICAL COMPANY  
c/o John A. Dickson, IV  
2300 Bank Street  
Fort Mill, SC 29715

NATIONAL FOAM, INC.  
c/o The Corporation Trust Company  
Corporation Trust Center  
1209 Orange Street  
Wilmington, DE 19801

THE CHEMOURS COMPANY  
c/o The Corporation Trust Company  
Corporation Trust Center  
1209 Orange Street  
Wilmington, DE 19801

THE CHEMOURS COMPANY FC, LLC  
c/o The Corporation Trust Company  
Corporation Trust Center  
1209 Orange Street  
Wilmington, DE 19801

TYCO FIRE PRODUCTS LP  
c/o The Corporation Trust Company  
Corporation Trust Center  
1209 Orange Street  
Wilmington, DE 19801